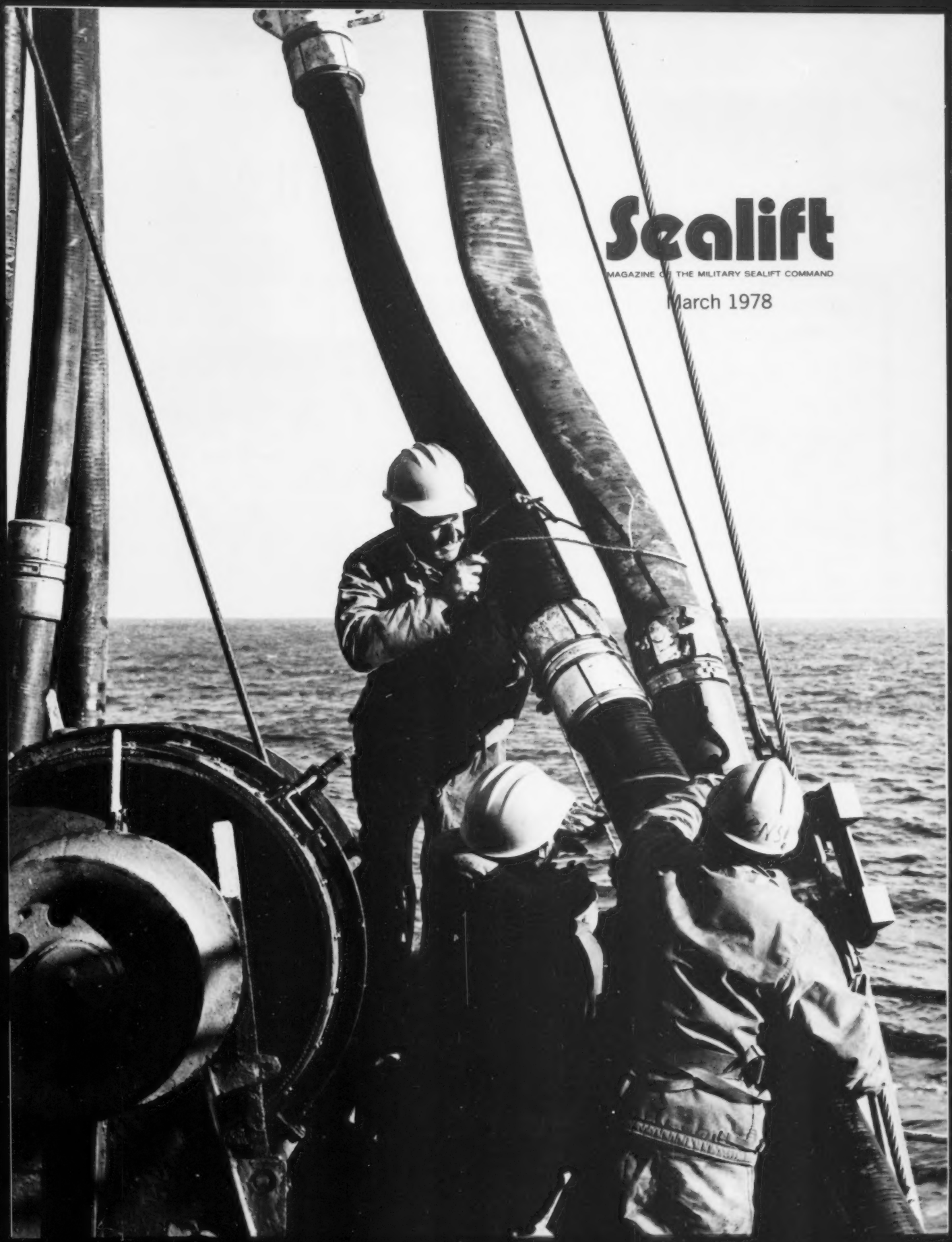

Sealift

MAGAZINE OF THE MILITARY SEALIFT COMMAND

March 1978

A Day to Honor All Mariners

National Maritime Day, 1978

By the President of the United States of America

A Proclamation

The American Merchant Marine is the lifeline that links America with its overseas trading partners. In times of peace, it builds our economy; in times of national emergency, it provides logistic support to our armed forces.

In recognition of the importance of the American Merchant Marine, the Congress, by joint resolution of May 20, 1933 (48 Stat. 73; 36 U.S.C. 145), designated May 22 of each year as National Maritime Day in commemoration of the departure from Savannah, Georgia, on that date in 1819 of the SS SAVANNAH on the first transatlantic voyage by any steamship, and requested the President to issue annually a proclamation calling for its appropriate observance.

NOW, THEREFORE, I, JIMMY CARTER, President of the United States of America, do hereby urge the people of the United States to honor our American Merchant Marine on May 22, 1978, by displaying the flag of the United States at their homes and other suitable places, and I request that all ships sailing under the American flag dress ship on that day.

IN WITNESS WHEREOF, I have hereunto set my hand this sixteenth day of March, in the year of our Lord nineteen hundred seventy-eight, and of the Independence of the United States of America the two hundred and second.

Jimmy Carter

As President Carter has indicated in his National Maritime Day Proclamation, our merchant marine has played a vital role in the development of our nation. We who are part of Military Sealift Command are very much aware of the professionalism and dedication of our seagoing comrades and I know that I speak for all MSC members when I extend our appreciation of their many contributions to national security, a responsibility we continue to share with them. We should take advantage of Maritime Day, May 22, to express our feelings in a most appropriate manner.

Commander, Military Sealift Command

COVER: Men of oiler USNS Waccamaw can be proud of their service to the Sixth Fleet. Story on page 9.

Sealift

Vol. XXVIII No. 3 Washington, D.C. March 1978

Features:

Cadet Recruitment

MSC seeks recruits on maritime academy campuses

page 4

Busy Waccamaw

Time has not slowed down MSC manned oiler supporting the Sixth Fleet.

page 9

Fleet Support History

Past, present and future of ships that make the U.S. Navy a vital force.

page 12

Also:

Cold Water Survival — 17

Satellite Communications — 20

Louisiana Ports — 21

Rear Adm. John D. Johnson, Jr.
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Captain Fritzke explains MSC career opportunities to U.S. Merchant Marine Academy cadets.

Photo by John Francavillo

Help Wanted Sign Out at Academies

By Louis Panarale

There is an old French adage that states The "more things change, the more they stay the same."

Following World War II, private ship owners depended almost solely on commercial trade. They needed young men to run the ships and experienced mariners were plentiful, thousands having worked aboard the Liberty and Victory ships that had been so vital to the war effort.

But, everyone gets older. Emphasis now is on recruiting young men and women who would like to follow a seagoing career.

In 1966, the median age for oceangoing deck and engineering officers was 45 years. Ten years later it was 50. For those not familiar with the terminology of statisticians, median is not the average but the middle of a range of numbers. Half are above and half below the median.

Many World War II veterans have already retired and most of the others will do so within the next 10 to 15 years. The composition of the marine work force is changing rapidly.

A Maritime Administration study shows that the officer work force of the future merchant marine will have a higher percentage of graduates of

federal and state maritime academies.

Retirements and inevitable shortages in some seagoing skill areas already have caused MSC to step up its recruiting program. MSC recruiters have begun visiting federal and state maritime academies, to seek new blood.

One man highly qualified to explain MSC career opportunities is Capt. Herman E. Fritzke, commander of MSC, Atlantic. He graduated from the U.S. Merchant Marine Academy at Kings Point, N.Y. in 1948.

In early March Captain Fritzke visited his alma mater, along with MSC, Atlantic Engineering Officer John Burke and Assistant Public Affairs Officer Richard Kenney. The three spent a day there presenting the MSC story to cadets graduating in June.

They stressed advantages that a new officer would have in MSC. A slide presentation helped illustrate some of the operations that make MSC a one-of-a-kind organization.

The MSC recruiting team explained the specialized areas of operations that make seamanship more challenging than a watch standing job aboard a point-to-point tanker or cargo ship. The cadets were shown such highlights as the USNS Vanguard on a tracking assignment during a NASA launching of a space vehicle, USNS Mizar locating the sunken U.S. atomic submarine Thresher, and USNS Victoria returning an F-14 plane that ran off the deck of the aircraft carrier Eisenhower. It was recovered from the ocean bottom.

The cadets asked about pay, benefits, leave time and other matters pertaining to MSC employment. When the group session was over, MSC recruiters met with individual cadets on an informal basis to answer more questions.

The result of the day's work was the immediate filing of applications by a score of cadets. MSC expects more applications will be received since interest in a job with the command was high.

Captain Fritzke has strong feelings concerning the need for MSC to recruit highly skilled officers who graduate from the maritime academies. "We have not paid sufficient attention to the maritime academies in the past," he said, "probably because of their commitment to train officers for the merchant marine."

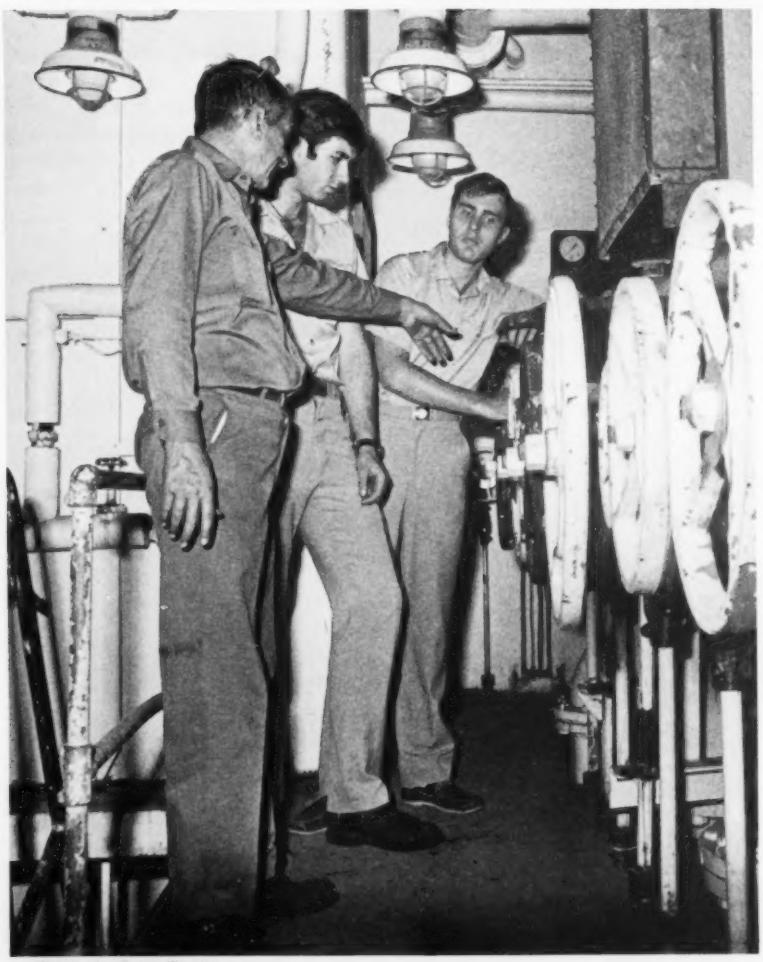
MSC's manpower needs are now more critical and the MSC, Atlantic commander feels MSC should emphasize that "employment with MSC offers an alternative to point-to-point ship operations." He feels MSC can and should get the message to academy midshipmen that the "excitement of MSC's varied missions is appealing to those with a spirit of adventure, a spirit in keeping with mans traditional affection for seafaring life."

"MSC is not a steamship company. It is a major Navy command. Our people are not just government employees. They serve the nation."

Captain Fritzke said MSC is anxious to employ academy graduates because their well-rounded experience is needed on the command's more specialized ships.

"Fleet maneuvers and underway replenishment at sea challenge an officer's ship-handling capability, while the sophistication of our special project ships requires a thorough knowledge of new developments in marine technology."

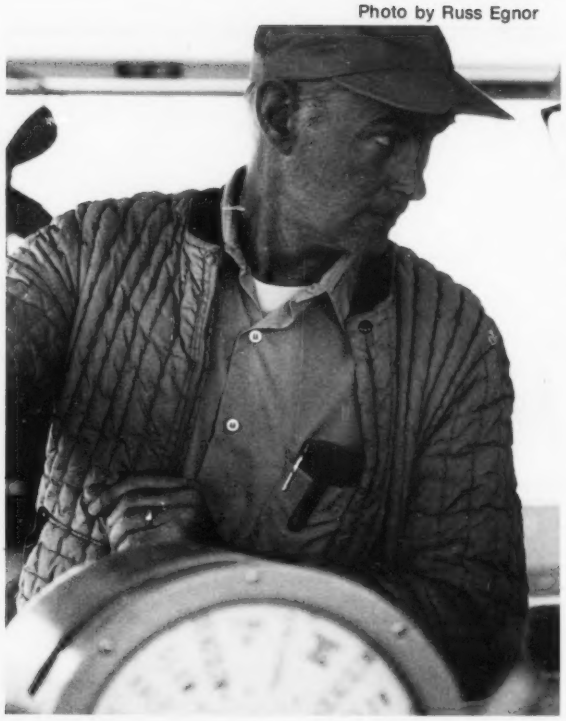
At MSC, Pacific a three-man MSC team will visit the California Maritime Academy to make a similar



First Officer Joseph Graceffa explains valve controls to cadets Richard Marinucci and Gary Wanzor.

Photo by Russ Egnor

Photo by Russ Egnor



Third Officer Charlie Cratty has been sailing since World War II and has spent 15 years on tankers.

Graceffa helps U.S. Merchant Marine Academy cadets gain practical work experience.

Photo by Russ Egnor

presentation. Richard B. Hosey is a member of that team.

Before Hosey became deputy operations and plans officer and port captain at MSC, Pacific he had been master of 16 MSC ships, every type of ship the command has operated except transports.

The California Maritime Academy is located at Vallejo, Calif. Hosey said that academy graduates now working for MSC have proved their abilities. "We have some outstanding maritime academy graduates and we are trying to provide incentives for them to become ship masters," Hosey said.

He added that when groups of cadets from the maritime academy tour an MSC ship in port, he tries to provide an MSC escort who is also an academy grad. The California Maritime Academy is graduating its first class of four-year cadets. Previously, the academy had a three-year course.

"We expect to recruit some excellent maritime graduates to work for MSC," Hosey said. He noted that two academy graduates now are masters of MSC ships. Robert Rhoads who recently retired, commanded the fleet support oiler Mispillion and Michael Watson is master of the roll-on, roll-off ship Meteor. Thirteen other California Maritime Academy graduates are sailing as mates on MSC, Pacific ships.

"We have to plan for the future," Hosey said. "By 1982 the number of MSC, Pacific ships will be double what it is today."

Among the acquisitions will be 12 new ocean surveillance ships. They are small vessels and their masters will stand an eight-hour watch and do most of the always necessary paperwork.

"These ships will require professional handling and will equip young people to move up in the organization. Working on these smaller new ships is a job that will require the stamina and enthusiasm of the young," Hosey said.

"The young people who come out of the maritime academies today are usually a cut above those who come up from the hawspipe," Hosey claimed. "Many are interested in specialized fields such as hydrographics, or oceanography. MSC has a variety of jobs that will interest the young maritime academy graduate because they will challenge him, and because they provide opportunity for rapid advancement."

Even before MSC recruiters began stepping up visits to federal and state maritime academies, the command used varied means of acquainting midshipmen with MSC operations.

In 1977, MSC authorized students of the U.S. Merchant Marine Academy, Kings Point, N.Y. to work aboard fleet oilers for three month tours. Since midshipmen work aboard ship in pairs, each MSC oiler can accommodate as many as eight each year. The program is open to midshipmen, men and women, of state maritime academies as well.

Over the past few years, MSC has been faced with two long-range problems. Officers who have reached retirement age must be replaced by competent people. At the same time the number of MSC-manned fleet support ships is growing and will continue to grow in the coming years. This means even more officers are needed, and recruiting programs must be more effective.

That is why midshipmen work and study aboard MSC chartered tankers. Working aboard commercial vessels is nothing new for midshipmen at the U.S. Maritime Academy. They have trained aboard contractor operated MSC ships for years.

As part of their schooling, midshipmen spend two school quarters in each of their sophomore and junior years aboard various commercial ships or MSC vessels. The purpose is to familiarize them with the routine of ship operation and the duties performed by officers and seamen.

The midshipman has his training manual with him at all times. After three months aboard ship, he forwards completed written assignments to the academy for grading. This means that the ship is both a realistic working environment and a seagoing campus.

Two U.S. Merchant Marine

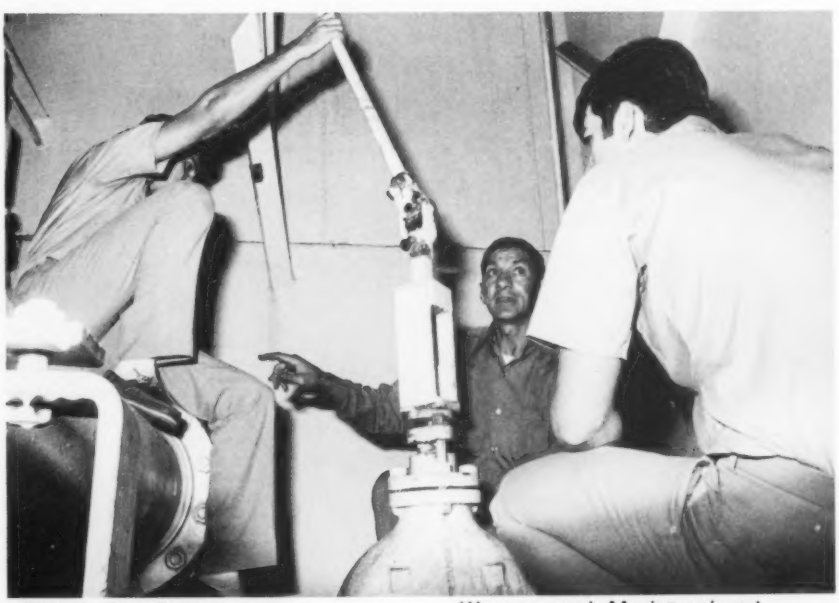


Photo by Russ Egnor

Wanzor and Marinucci get into tighter quarters as Graceffa gets down to specifics.

Academy midshipmen recently completed a tour aboard the USNS Sealift Indian Ocean. The ship is one of nine tankers built by private owners for long-term charter by MSC. Indian Ocean is manned by a civilian crew under an MSC contract with Marine Transport Lines.

Last October Richard Marinucci, of Passaic, N.J. and Gary Wanzor, of Fanwood, N.J. reported aboard the Indian Ocean in Baltimore where it had completed a yard period. Both are 20 and in their second year at the academy.

Marinucci had previously sailed aboard the MSC cargo ship USNS Towle on cruises to the Arctic and Antarctic, and proudly sports a belt with an MSC monogram on the buckle.

For Wanzor, it was his first assignment aboard an MSC operated ship. However, he has sailed as a cadet aboard merchant marine container ships.

First Officer Joseph Graceffa, a retired Navy lieutenant and former machinist mate, was in charge of orientation for the two midshipmen aboard Indian Ocean. It was the first time since he has worked aboard tankers that he has helped train cadets. He said he hoped more would follow.

The term "midshipman" does not always refer to the male of the species. A growing number of women are now attending the maritime academies.

Two women midshipmen from Kings Point recently spent a three-month training period aboard USNS Maumee, an ice-strengthened tanker that makes Antarctic and Arctic runs.

Christine Zarate and Fern Doyle said they learned valuable lessons on life at sea. Zarate is an engineering major and spent a good part of her time wearing coveralls and working in the engine room. Doyle, a deck cadet, was more involved in paperwork.

"I learned," said Zarate, "that the men treated us just as they would any midshipman. Once they saw that Fern and I were willing to work and do what was expected of us, they were very willing to help."

Doyle expressed the same feeling, adding that neither women asked for any special favors. "I think it was very important that we didn't," said Doyle.

If the success of the training given aboard MSC ships is an example, midshipmen now being recruited at the maritime academies can be confident that opportunities are available in MSC, and that everyone will have a chance to advance his or her career as an important member of the MSC team.

MSC Commander Rear Adm. John D. Johnson stressed that point in his message in the January issue of Sealift magazine. At the top of a list of suggested resolutions for command members to follow was this:

"We will never for a moment forget that it is people who make the command what it is, and each of us will therefore do our utmost to insure that MSC is a personally satisfying and rewarding place to work." ⚓

Deck Cadet Fern Doyle gets acquainted with Maumee's navigational instruments.

Photos by YN3 Stacey Huesmann

Engine Cadet Christine Zarate found working in the engine room a rewarding experience.

USNS Waccamaw Busier Than Ever

Rig team members check lines before another underway replenishment begins.

The years and demands of underway replenishment operations have not slowed down the Military Sealift Command manned oiler USNS Waccamaw which has been as busy as ever in support of the Sixth Fleet in the Mediterranean.

In a recent six-month period the Waccamaw crew completed 173 underway replenishments of Sixth Fleet ships. That amounts to nearly one operation a day in what the Navy calls a "high tempo" schedule.

Working with the Waccamaw in support of Navy ships in the Atlantic were two MSC manned oilers, USNS Pawcatuck and USNS Marias, seven other fleet oilers and two fast combat support ships manned by Navy personnel. MSC manned Navy ships are crewed by Civil Service mariners and a small military detachment.

As part of the 12-ship contingent of Atlantic Fleet oilers, three MSC manned ships have made one third of the underway replenishments.

Before Waccamaw was assigned to MSC it was manned by 285 Navy bluejackets. It now is manned by

108 Civil Service mariners and a communications detachment of 16 Navy personnel.

On February 25 Waccamaw celebrated its third anniversary as an MSC manned oiler, one of five jumboized oilers in the command's fleet support inventory. The others are the Pawcatuck of MSC, Atlantic, and the Mispillion, Navasota and Passumpsic, assigned to MSC, Pacific.

They were dubbed jumbos by the Navy in the mid-1960s when their midsections were extended to increase their cargo capacity from about four to seven million gallons.

Waccamaw operated at an especially high tempo during NATO exercise Isle d'Or in late November, in the Mediterranean. In five days the oiler completed 18 replenishments with eight ships. Ships serviced included one Italian, two Dutch and three U.S. frigates in addition to the carrier USS Saratoga and the guided missile cruiser USS Biddle.

The exercise provided valuable training for the crews of all ships, including rig teams and bridge personnel on Waccamaw. During the initial phase, the ships made approaches and dry hookups with the Waccamaw. In the final stages Waccamaw completed its replenishments with little difficulty.

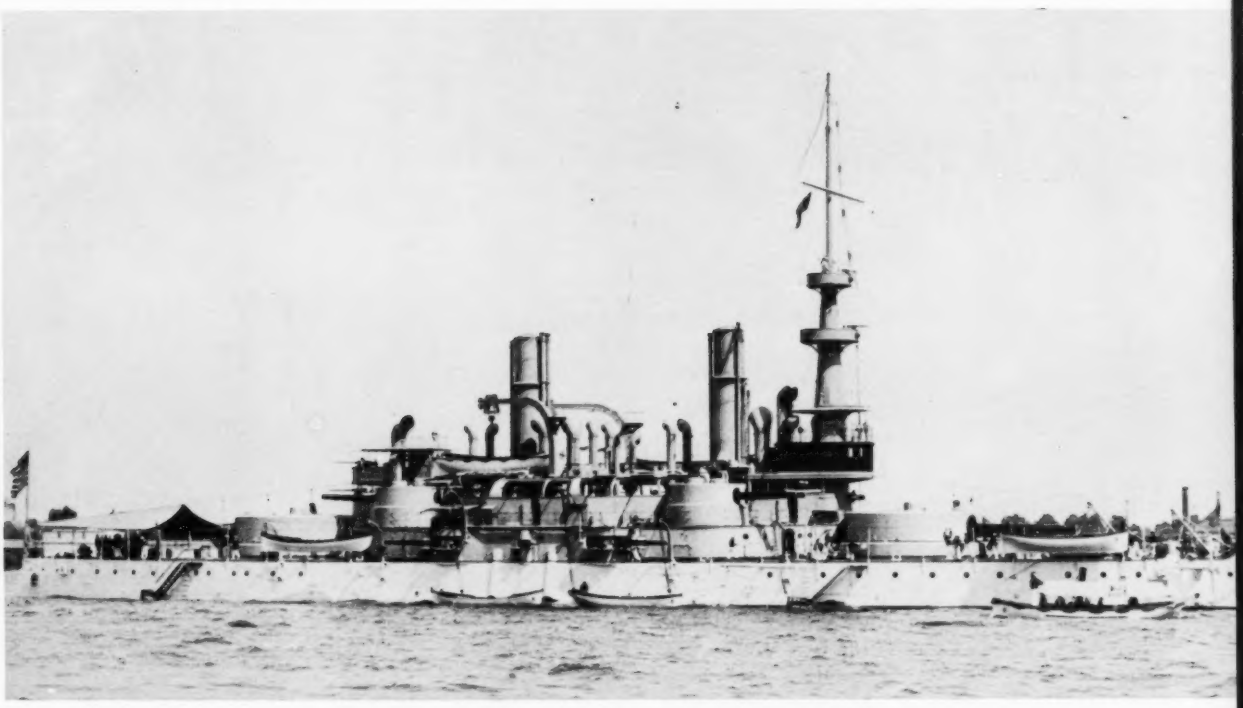
Near the end of the exercise the Waccamaw ran into heavy seas while trying to replenish the Saratoga. The replenishment was delayed until the next day, but was completed successfully. Waccamaw then sailed for Rota, Spain where all hands had a well deserved if short rest. ⚓

A phone man on deck of Waccamaw reports progress of operations to the bridge.

Crewman makes sure there will be no snarls when line is sent to receiving ship.

The hoses come down and the Waccamaw begins another unrep in a busy schedule.

Signalman on Waccamaw calls for proper moves to deliver hose safely over choppy waters.



Replenishment at Sea Adds Muscle to Navy

By Linda Quinones

For centuries navies have relied on specialized vessels to provide warships with vital supplies and services, thus enabling combatants to travel greater distances and to remain at sea for extended periods.

In the sailing era auxiliary ships were most often merchant vessels that were pressed into service when needed. As steam and rifled guns were added to shipboard arsenals, even more specialized auxiliaries — such as coal ships, or colliers, and ships that could store and handle bullets shells and powder bags — became an integral part of navies.

Modern fleet support ships are a far cry from the merchant ships that rendezvoused with Lord Nelson's frigates and ships of the line to transfer supplies in calm anchorages. But the rationale for logistic support of warships remains the same. The fleet must have supplies in order to fight.

The U.S. Navy's Military Sealift Command now mans 17 U.S. Navy fleet support vessels, including oilers, a refrigerated stores ship, oceangoing tugs and fleet ballistic missile resupply ships. In addition, with the completion of four tugs now under construction for the Navy, MSC will have the responsibility of manning all new U.S. Navy fleet tugs.

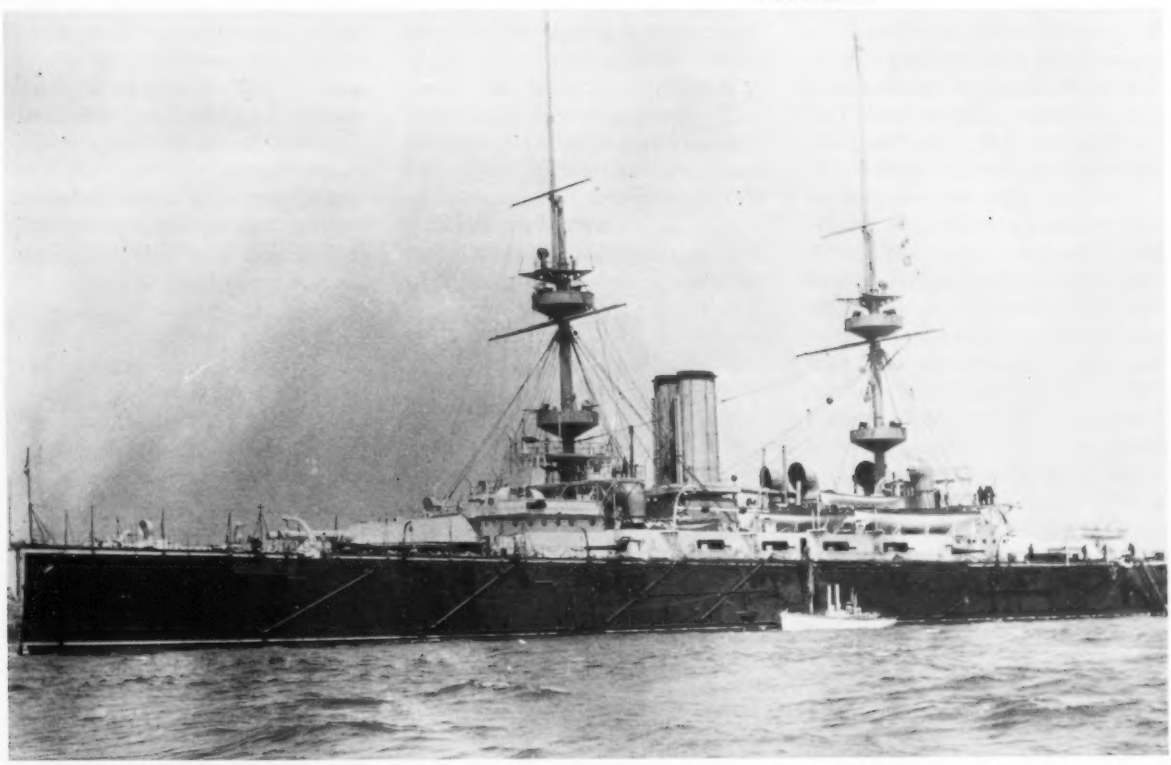
The four Navy fleet tugs already manned by Civil Service merchant mariners have earned numerous plaudits for outstanding support of Navy fleet operations.

MSC moved into the replenishment business when the former fleet oiler USNS Taluga was assigned to the command in 1972 for Civil Service manning as part of a series of tests to evaluate civilian manning of auxiliary ships.

The Charger Log II Program was a resounding success and led to the transfer of additional vessels to the command for operation. The effectiveness and cost advantages of civilian manning of fleet support ships promises to make fleet support

The battleship USS Massachusetts was supplied with coal in 1899 in what is believed the first underway replenishment.

The British battleship HMS Victorious was refueled at sea in 1906 by the tanker Petroleum.



MSC oiler Taluga consolidates fuel with an MSC chartered tanker.

a continuing and growing role for the Navy command.

A look at the development of Navy auxiliary ship roles throughout the years indicates that their tasks have not always been accomplished with the ease and polish they are today. But, their services have been of vital importance.

The first underway replenishment at sea is said to have taken place in 1899 when the collier Marcellus transferred coal to the U.S. Navy battleship Massachusetts.

Massachusetts towed the coal ship some 300 feet behind it and a trolley was rigged between the two ships. During an 80-minute operation, 80 loads of coal were transferred. The trolley was operated by sailors heaving on lines. The British Admiralty later carried out a similar trial between HMS Trafalgar and the collier Murial.

The need for improvement of replenishment techniques was vividly illustrated during the Great White Fleet's around-the-world cruise in 1907-1908. Nearly 75 per cent of the coal needed to fuel the 16 battleships was supplied by foreign sources. The fleet even had to depend on coal delivered by British and Norwegian ships, and by contractors while anchored in San Francisco Bay.

In 1906 the British Navy conducted the first fuel oil replenishments between underway ships. The first Royal Fleet tanker, aptly named Petroleum, successfully refueled the battleships Hindustan, Victorious, Dominion, and Commonwealth. In these early experiments the warship towed the supplying ship which pumped oil through a 5-inch flexible copper hose suspended from stirrups on the towing wire.

Prior to World War I, the comparative advantages of afloat logistics and delivery to a fleet operating area were the subject of much debate. Some were skeptical of the capabilities of tenders and repair ships, saying they were capable only of accomplishing minor repair and upkeep. They doubted the practicality of fueling ships while under way.

Despite this, a few specialized Navy auxiliary ships were developed before World War I. Destroyer tenders were placed in service to provide maintenance, spare parts, torpedoes, ammunition and other materials to then small destroyers. Repair shops and submarine tenders also were added to the fleet.

During World War I the oiler Maumee, with Lt. Chester W. Nimitz as executive officer and chief engineer, developed basic underway replenishment techniques used today by the Navy.

While Maumee and a destroyer steamed 50 feet apart, rubber hoses were passed to the destroyer and connected to deck fittings. Maumee pumped fuel and fresh water to the destroyer and supplies in cargo nets and personnel were passed between the two vessels using cargo booms on the oiler.

Maumee refueled some 30 destroyers in the same manner in the first three months of the war.

Following World War I, part of the Navy fleet was transferred to the West Coast and the Base Force was formed. Mission of the Base Force was to logistically support the fleet. After the United States entered World War II, the Base Force became the Service Force and in January 1975 it was consolidated into the Naval Surface Force which supported both the Atlantic and Pacific fleets.

MSC fleet support ships are under the operational control of fleet commanders and their designated force or group commanders.

In the Atlantic, MSC oilers are controlled by Service Group Two, Second Fleet. In the Mediterranean, the operational control is provided by the Sixth Fleet's Task Force 63.

In the Western Pacific, MSC manned fleet support ships are controlled by Task Force 73, an element of the Seventh Fleet. In the Eastern Pacific, MSC manned fleet ships are controlled by Service Group One, a Third Fleet component.

In 1925 the operating force of the Navy consisted of 234 vessels—17 battleships, 15 cruisers, a second-line carrier and 2 second-line mine-layers, 6 destroyer-mine layers, 103 destroyers, 80 submarines, 9 patrol gunboats, and a single submarine.

Seventy-five vessels serviced these

ships. Included were oilers, colliers, tenders, repair ships, stores ships, ammunition carriers, hospital ships, mine sweepers, transports, fleet tugs and miscellaneous small craft.

The U.S. Navy rapidly doubled in size after the start of World War II, then tripled and continued to expand. Merchant ships by the hundreds were acquired and converted to fulfill auxiliary roles. Hundreds more were built specifically to handle support tasks.

New types of auxiliaries included tenders for motor torpedo boats, cargo ships that carried antisubmarine nets and net-laying ships to tend the nets, plus gasoline oilers that lifted aviation fuel and gasoline. Others were self-propelled barracks ships to berth and feed landing craft crews, salvage ships, water distilling ships, stores ships that carried spare parts, and repair ships for engines, landing craft, and aircraft.

By 1945 auxiliary vessels totaled 315. The 14 oilers, all the Navy owned in 1940, had leaped to 62. Merchant tankers were acquired to transport oil, aviation gasoline and diesel fuel to bases where Navy tankers loaded it and distributed it to the fleet. There also were 21 repair ships of various sizes compared to the two the Navy had five years before.

In addition, the Navy had 3 floating drydocks, 2 cruisers, 9 destroyers and 16 small craft. The number of hospital ships rose from one in 1940 to 6 in 1945. Navy also had 3 transport evacuation vessels, 14 ammunition ships, 28 cargo carriers, and 8 LSTs (tank landing ships).

World War II auxiliary ships operated everywhere U.S. warships did. They repaired and otherwise supported all classes of warships along both the Atlantic and Pacific coasts. In the Atlantic, auxiliaries refueled warships headed for Europe. They also provided advance base facilities as the Allies captured ports in North Africa, the Mediterranean and on the coast of Western Europe.

In the Pacific, the U.S. Navy lost its naval and air bases in the Philippines and Guam during the early Japanese advances. As fast U.S. carriers struck out across the Pacific in the dark days of 1942, they were accompanied by oilers. Periodically, combatant ships rendezvoused with other auxiliaries that provided replacement aircraft, munitions, and provisions.

As U.S. forces went on the offensive, auxiliary ships, which numbered 1,800 at the end of the war, were assigned to advance bases at Ulithi, Eniwetok, Guam, the Philippines, Manus and Okinawa as those areas were wrested from the Japanese.

These advance bases and the use of underway replenishment ships permitted warships to remain in battle considerably longer than would have been possible had they needed to return to the U.S. West Coast, Hawaii or Australia for support, supplies, or repair.

During the Okinawa campaign, one carrier task group, usually composed of three or four carriers and supporting warships, set a record of 79 days at sea, 52 in combat. The aircraft carrier Essex, flagship of the task force, steamed more than 33,865 miles in that time, a distance equal to almost one and one half times around the world at the equator. Fuel for ships involved in this record operation was provided by underway replenishment oilers.

During the 1950s, the Navy established the Sixth Fleet in the Mediterranean and the Seventh Fleet in the Western Pacific. Each had 30 to 50 combatants. Most of these deployed ships were based on the U.S. Atlantic and Pacific coasts and rotated duty in the Western Pacific and Mediterranean. All depended on auxiliary support ships to sustain their operations.

Increased Navy operational strength required additional and larger replenishment ships and during the 1950s the Navy built six large Neosho class oilers, five Suribachi class ammunition ships, and two Rigel class refrigerated stores ships. One of these Navy refrigerated stores ships, USNS Rigel, has been manned by MSC since 1976.

By the late 1950s, helicopters were routinely being used in underway replenishment of combatant ships, lifting material from replenishment

Underway replenishments include stores, such as the boxes of lettuce being transferred from the Rigel to a Navy fleet ship.

ships and flying it to the warship. Called vertical replenishment, this technique reduces the time that ships must steam alongside, a situation which leaves a combatant ship vulnerable to attack.

Seven of the eight MSC manned oilers and the Rigel have helicopter landing pads on their decks and can simultaneously transfer both fuel and other supplies. MSC manned fleet oilers with this multi-product capability are USNS Mispillion, Mississinewa, Navasota, Passumpsic, Pawcatuck, Taluga and Waccamaw.

During the 1950s, older Navy auxiliaries were modernized and new ones built to support increasingly complex and technologically sophisticated warships.

The first of the new auxiliaries were two Hunley-class submarine tenders built in 1962. These and later-built Simon Lake-class tenders were designed to support Polaris-Poseidon Missile submarines.

After a missile submarine completes a 60-day submerged patrol, it goes alongside the tender for about two weeks of maintenance and replenishment. The tenders carry all necessary stores and supplies for submarines and can perform almost every type repair required. They also carry replacement missiles and have extra berthing space to accommodate several hundred submariners during the change of crews following the 60-day patrols.

Other tenders constructed during the 1960s and 1970s are the L.Y. Spear class, which service nuclear and conventional attack or non-missile submarines, and the Samuel Gompers-class destroyer tenders. They support modern, highly complex destroyer-type warships.

New replenishment ships built in this period include Mars class combat stores ships which deliver fresh and frozen food, dry stores, aviation supply items and spare parts; the fast Sacramento class combat support ships which combine the functions of ammunition ships and oilers, and Wichita class replenishment oilers. MSC does not operate any of these ships, all of which are larger than their World War II predecessors.

MSC operates 17 of the Navy's 93 auxiliaries. Eight are oilers, the Marias, Taluga, Mispillion, Waccamaw, Navasota, Passumpsic, Pawcatuck and Mississinewa. The refrigerated stores ship is the Rigel. The four fleet tugs are the Atakapa, Lipan, Mosopelea and Ute. The four ballistic missile resupply ships are the Furman, Marshfield, Norwalk and Victoria.

Five more fleet oilers, the Neosho, Truckee, Hassayampa, Kawishiwi and Ponchatoula will be assigned to MSC for manning between fiscal years 1978 and 1981. They will replace older oilers now manned by MSC.

All MSC fleet support ships are manned by Civil Service Navy employees. A Navy military detachment is assigned to each ship to handle communications and liaison duties, and a Navy courier team is aboard fleet ballistics resupply ships on their outbound voyages.

To expand the replenishment capabilities of eight MSC manned oilers, refrigerated containers have been installed on the decks providing service under what is known as the mini-multi concept. The oilers can transfer refrigerated stores at the same time fuel is being passed to the combatant ship. Oilers equipped with containers are the Taluga, Passumpsic, Marias, Mispillion, Waccamaw, Pawcatuck, Navasota and Mississinewa.

In addition, the command continues to train civilian crews of MSC point-to-point tankers by underway refueling of Navy fleet ships able to pass fuel rigs to the MSC tankers. The point-to-point tankers have been involved in dozens of training exercises with combatant ships, exercises which are held whenever fleet and MSC operational schedules permit.

A practice that began with Lord Nelson's fleet, refined by the U.S. Navy to allow underway replenishment as a routine operation, has become a vital means of keeping Navy combatant ships at sea for long periods. All of which proves that a tradition begun in the early years of the U.S. Navy when civilian mariners and uniformed Navy men combined their skills to make the United States a major seapower is alive today. It is a basic element of Navy operations and strategy. ⚓

Waccamaw crewmen prepare to haul back lines after completing an unrep.

Cold Water Survival

Survival is a matter of concern on the city street, in the economic jungle or on the highway where every driver is a potential taker of lives. But, for a human stranded in a vast ocean, survival is his only concern. Every action must be dedicated to saving his own life.

Sharks, whales, stingrays, and other sea creatures can be a real menace to the helpless human who finds himself thrashing about in the water. But the greatest threat to human survival in a hostile sea is never seen.

It is not a thing but a condition, the temperature of the water.

The sinking of the Titanic in 1912 provided a dramatic example of the effects of cold water on the human body. The British luxury liner sank during its maiden voyage on April 14 south of Grand Banks, Newfoundland after striking an iceberg.

None of the 1,489 persons immersed in the 32 degree water was still alive when rescue vessels arrived two hours after the sinking. Yet nearly all of the people in lifeboats survived.

Looking back on that tragedy, the U. S. Coast Guard feels many more lives could have been saved if the victims had known how to cope with cold water. Other lives have since been needlessly lost because of a similar lack of survival know-how.

In a pamphlet, A Pocket Guide to Cold Water Survival, the Coast Guard notes actions that can be taken to stay alive.

"Body heat loss is a gradual process and recent research shows that in 40 degree water a normally dressed person has a 50 per cent chance of survival after two hours exposure. Simple self-help techniques can extend this time to three hours or more if a person is wearing a life vest."

The pamphlet reviews the hazards of exposure to cold and offers advice on how to minimize the dangers.

"Understanding how your body reacts to cold air or water exposure and knowing the steps you can take to help your body delay the damaging effects of cold stress will help you in your struggle to stay alive in the event of cold water exposure."

Visualize the body as having an inner core protected by an outer wrapping. Within the core, the body produces heat as the result of normal body functions, such as digesting food and physical exercise. Normally the body core is maintained at an ideal temperature, 98.6 degrees.

The body's regulatory system tries to maintain that

temperature despite variations in the environment. But the body can do this only within certain limits.

In extreme cold, the body must have help in maintaining the core temperature at 98.6 degrees. In those cases, we must give our bodies help by providing insulation in the form of protective clothing.

Clothes by themselves do not warm the body. Body heat warms the layer of air trapped between the skin and clothing. It is this layer of air that provides insulation. If the layer of air is lost, the insulation is lost.

The human body gives off its heat in the following ways:

CONDUCTION—Heat is transferred by direct contact with cold water or other materials, passing from the body to a material such as water when it is lower in temperature. Some materials are better conductors of heat than others. Water, for example, conducts heat 25 times faster than air.

CONVECTION—Heat is transferred to a passing flow of air or water. Flowing air cools the body more than air that is motionless. This is known as the wind-chill effect. Similarly, flowing water is more chilling than still water at the same temperature.

RADIATION—Heat is transferred by rays of energy without direct contact with other materials. In this case, the body acts like a radiator.

EVAPORATION—This is the drying up of moisture, such as body perspiration. As perspiration evaporates, it takes heat with it. Although perspiration is useful in providing the body with a cooling effect, it robs the body of valuable heat on a cold day.

Loss of body heat is probably the greatest hazard to the survival of a person in the water. The rate of body heat loss depends on water temperature, the protective clothing worn and how the survivor conducts himself.

An abnormally low body temperature can be recognized by a variety of symptoms. Very early during exposure, the body tries to combat heat loss by constricting surface blood vessels. That reduces transfer of heat to the body's surface by the blood. The body will also begin to shiver, a physical activity that produces heat.

As the body core approaches 95 degrees, body temperature starts to fall more rapidly. As the temperature continues to drop, signs of pain, fatigue, poor coordination, numbness, disordered speech and mental confusion occur.

When internal temperature decreases into the 80s, unconsciousness may result, as well as the skin turning blue, collapse of the veins in the skin, enlargement of the eyes' pupils, muscular stiffness, an irregular heart beat and a weak pulse.

Death may occur when the body core temperature is between 80 and 85 degrees, but is more likely when body temperature drops below 80.

The Coast Guard always has urged those who sail on vessels of any size to be fully prepared, to be aware of survival procedures. The chance of survival for people who abandon ship or fall overboard is increased when they understand the dangers and how to cope with them.

Military Sealift Command also stresses the importance of preparedness in all phases of survival at sea, including cold water survival which is covered in Chapter 5 of the MSC Damage Control Manual.

It notes that, "Each individual has an obligation to himself and to his shipmates to be prepared to survive and to aid others to survive. The time to learn survival techniques is now. You won't have time to break out the book in a casualty situation."

Coast Guard records indicate that it generally takes a sinking ship at least 15 to 30 minutes to fully submerge. This allows crewmen time to prepare themselves for the most serious challenge they may ever face—keeping alive.

Following are what the Coast Guard calls "sound pointers," tips everyone should keep in mind if they have to abandon a ship.

*—Don a personal flotation device, such as a life jacket, as quickly as possible. It is probably the single most important item of survival equipment. Survival in cold water is tough enough without having to struggle to stay afloat. Know how the flotation device is worn and how it works before you have to depend on it.

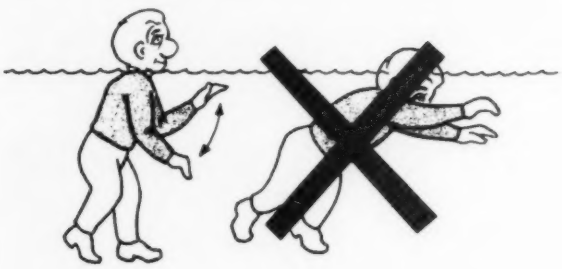
*—Naturally, it is better to enter the water in a lifeboat or raft and thus avoid losing valuable body heat to the water.

*—Wear several layers of clothing. If you are lucky enough to stay dry in a lifeboat, air trapped between the layers of clothing will provide excellent insulation. Even if wet, the clothing will slow body heat loss.

*—Protect your head, neck, groin and the sides of your chest. These are the areas of rapid heat loss to cold water. Water repellent gloves which fit snugly at the wrists, insulated boots and layers of socks, a covering for the head and a scarf or towel for the neck all help reduce loss of body heat and prolong the use of the arms and legs.

*—If you can not abandon ship in a lifeboat, rather than jumping try to lower yourself into the water gradually. A sudden plunge in cold water can lead to an uncontrollable rise in the breathing rate or an intake of

Courtesy of U.S. Coast Guard



water into the lungs, both of which can be fatal. If jumping is necessary, hold your breath and pinch your nose to avoid swallowing water.

*—Once in the water, orient yourself. Try to locate lifeboats, life rafts or other floating objects. Button up as much as possible. In cold water you may experience great pains and shivering. These are natural body reflexes that are not dangerous in themselves.

*—While afloat in the water, do not attempt to swim unless you are trying to reach a nearby craft, a fellow survivor or a floating object to help keep afloat. Rapid movements increase body heat loss. It is important to remain as still as possible in the water, however painful it may be. Pain will not kill, but heat loss will.

*—Do not use "drownproofing" in cold water. Drownproofing is a technique for relaxing in the water by allowing your head to submerge between breaths. It is an energy saving procedure that works in warm water when not wearing a life jacket. However, the neck and head are high heat loss areas and must be kept out of cold water.

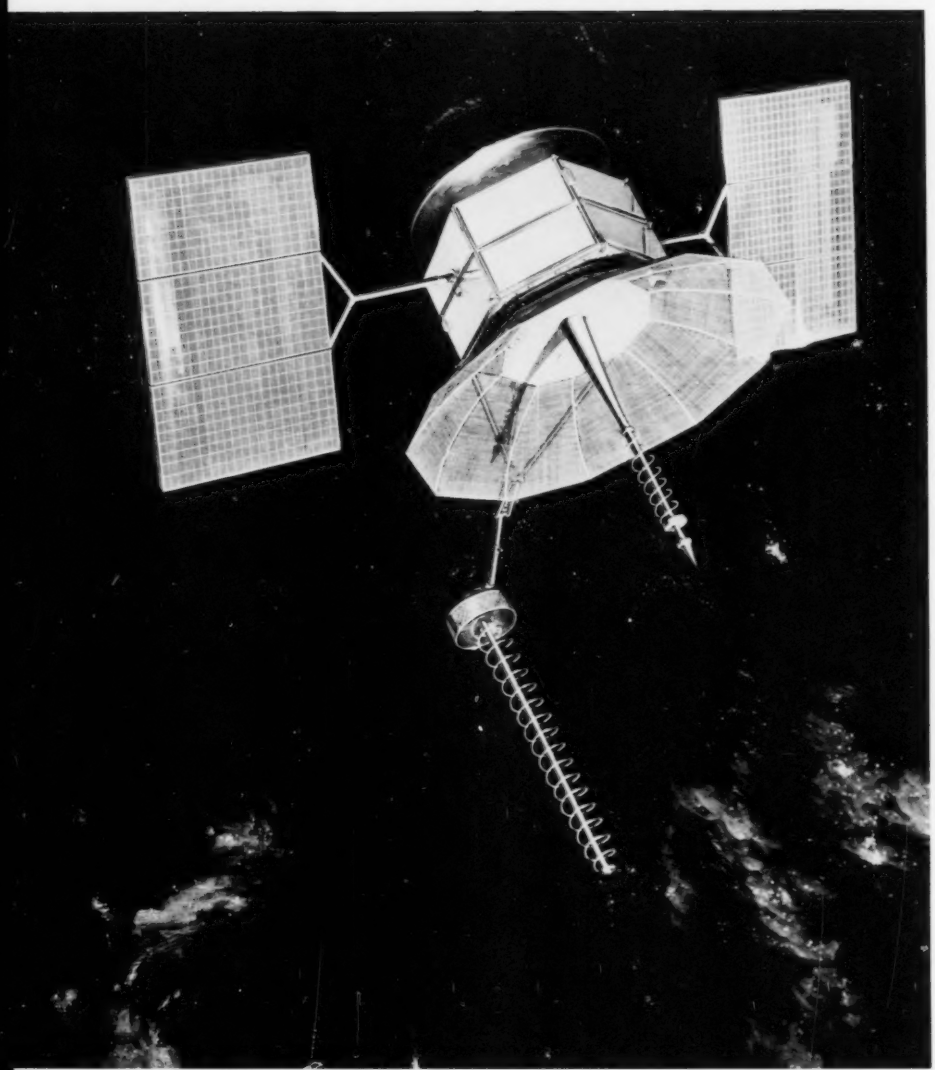
*—Tests show that the best body position in the water is the one in which knees are pulled up to the chest with arms against the side of the chest. This position minimizes exposure of groin and chest sides.

*—Try to board a lifeboat, raft, or other floating object as soon as possible. Remember, you lose body heat about 25 times faster in water than in air. When you get out of the water, shield yourself to avoid wind chill. Huddling close to others in a lifeboat also helps conserve body heat.

*—Keep a positive attitude about survival. Considering the shock and the stress of being in the water, it will not be easy. But you improve your chance of surviving if you remain calm. The will to live is a key factor in survival.

The Coast Guard pamphlet offers this final advice. Plan ahead so that you are materially and mentally prepared. Think survival and your chance of being a survivor instead of a statistic are much greater. ⚓

Satellite To Improve MSC Communications



This satellite is the first link in a system to provide better military communications.

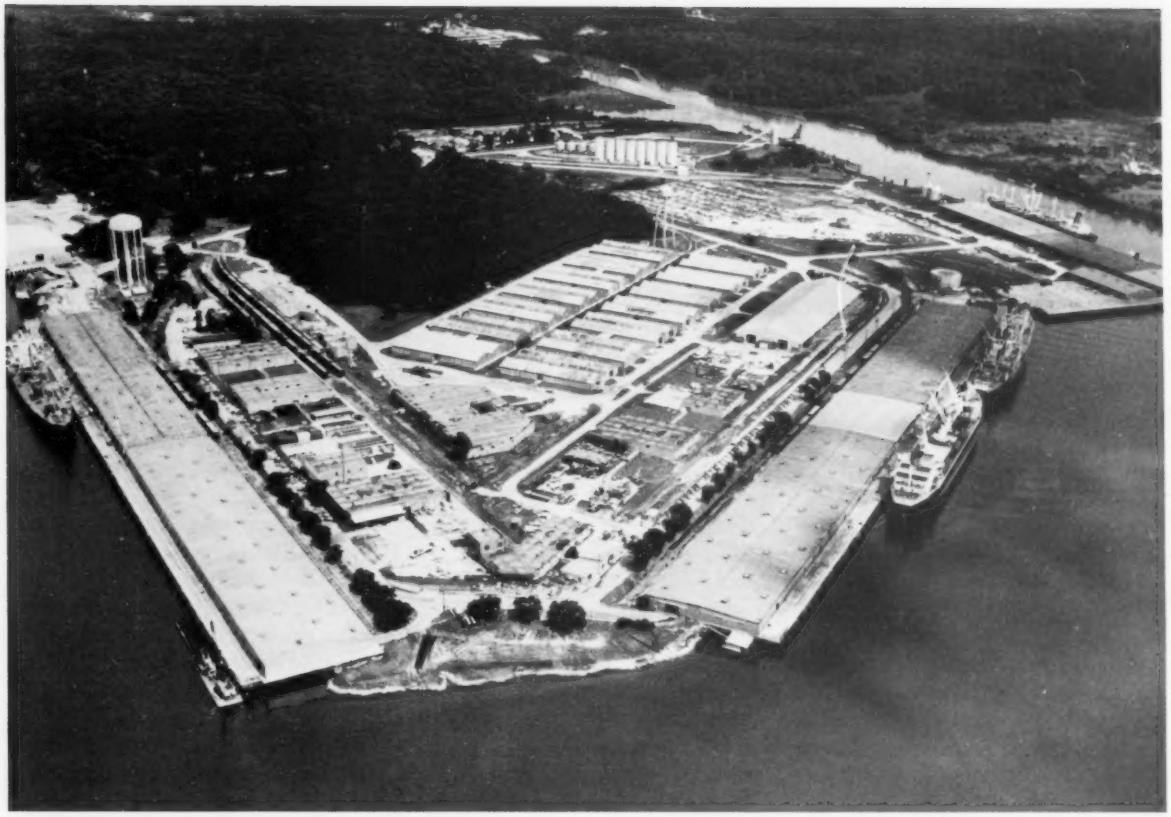
Military Sealift Command fleet support and special project ships are to be hooked into a new satellite communications system that the National Aeronautics and Space Administration has described as "highly versatile."

The first spacecraft in the new worldwide military communications system was launched from Cape Canaveral on February 9. The system is called Fleet Satellite Communication and replaces the gap satellite system Navy now uses.

NASA announced that the new satellite system will support the vital communication needs of the Navy, Air Force, Department of Defense and Presidential command network. Each of the several satellites that eventually will be put into orbit will provide 23 operating channels.

The Navy will use one fleet-broadcast and nine fleet-relay channels. The system will provide communications between naval aircraft, ships, submarines and ground stations. Both ship-to-ship and ship-to-shore communications are possible.

"The satellite system will provide reliable, secure communications between naval units anywhere in the world except the extreme polar regions," NASA announced. "Even relatively small vessels can be equipped with the inexpensive antennas and simple equipment needed to participate in satellite communications."



The Port of Lake Charles' short route to the sea is a major factor in its growth.

Gulf Ports Support Expanding Trade

By Edward S. Reed

In 1543 the Spanish explorer Hernando DeSoto was leading an expedition above the mouth of the Mississippi River when he came upon a ceremony in which two Indian tribes were setting a red pole into the ground near a river bank.

DeSoto later learned that the pole was a boundary marker set by the Istrouma and Bayou Goula Indians to identify the borders of their tribal hunting grounds. French explorers and traders subsequently covered the eight-mile and straight stretch of the river in what now is southern Louisiana.

The French words for red pole, "baton rouge", became the name of the settlement that grew into a rollicking and commercially successful city around that Indian boundary marker.

In 1719 the French built a fort on the site. The area was ceded to Britain

in 1763 at the end of the French and Indian War.

In 1800, Spain gave Louisiana to France and Napoleon sold the territory to the United States in 1803 in what history refers to as the Louisiana Purchase. Baton Rouge, however, was claimed by Spain as was the entire area of west Florida.

U.S.-born citizens in the surrounding parishes rebelled against the Spanish rule and in September 1810 established the West Florida Republic. It too was eventually annexed by the United States.

Baton Rouge's growth as an industrial center accelerated with the building of the Standard Oil refinery in 1909. The establishment of other oil industry facilities followed.

By 1920 the Port of Baton Rouge was generating more than 1.2 million short tons of cargo each year. By 1930 the tonnage had nearly tripled, and in 1940 the port handled 7.5 million tons of cargo.

In 1952, when the Louisiana legislature created the Greater Baton Rouge Port Commission, the port moved more than 12 million tons of cargo.

By 1962, tonnage was 26.6 million tons. As the 1970s began, the cargo handled totaled 45.5 million tons of cargo.

Baton Rouge then was the seventh largest port in the United States. By the end of 1976, after the port handled a record total of 66.7 million tons, Baton Rouge was the fourth largest U.S. port, according to port officials.

Food grains are the principal export items handled through the port of Baton Rouge. Paper and wood pulp also account for much of the port's exports, followed by coal, chemicals, fertilizers and petroleum products.

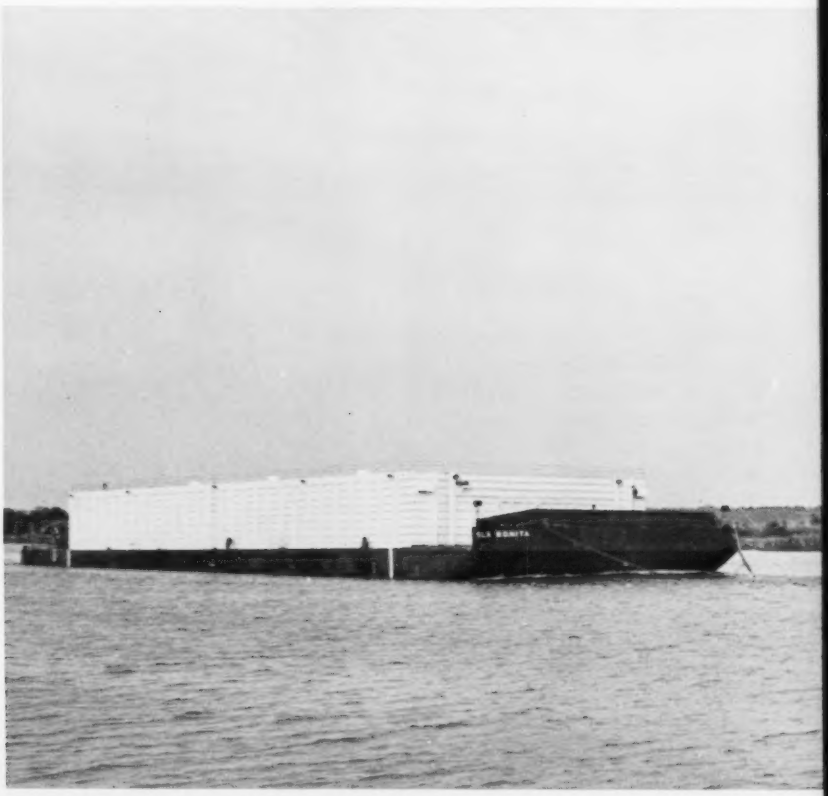
Principal items imported include aluminum ores and concentrates, and crude petroleum. Other leading imports are Japanese automobiles and motorcycles, South American coffee, African lumber and European steel.

Baton Rouge is the farthest inland point on the Mississippi River that can be reached by large oceangoing vessels. Port officials have tried to provide an integrated, balanced water transportation system and service now offered testifies to the success of their efforts.

The port berthing area contains 684,000 square feet of dry storage space. There are an additional 100 acres of open storage, a 10-acre paved area for imported automobiles and a 100-acre container area. Four linehaul railroads, seven interstate motor carriers and numerous local and regional carriers service the port area.

Virtually every common-contract barge line serving the lower Mississippi River calls at the port. The largest percentage of cargo movement at Baton Rouge, in recent years, has been moved by barge, and accounts for 60 per cent of the port's inbound cargo and 45 per cent of outbound volume.

Major public facilities owned by the Greater Baton Rouge Port Commission include a grain elevator, a bulk handling terminal, a tank



Gulf Caribbean Marine is one of numerous barge lines serving Lake Charles.

terminal, a public commodity warehouse and a barge terminal.

Looking to the future, port officials intend to take greater advantage of the river. There will be continued development of the 90-mile strip of river front between Baton Rouge and New Orleans, an area which has been described as "America's Ruhr Valley" because of its concentration of industrial plants.

The port has been increasingly vital to the area's economic growth, a trend which is expected to continue. Port officials are confident that by the year 2000 waterborne commerce at the port will surpass 100 million tons.

For more than 100 years, the good burghers of Lake Charles could only wring their hands in hopeless frustration that stemmed from knowing they were so near, and yet so far, from attainment of a dream.

They were geographically situated almost within hailing distance of a deepwater seaway with all its opportunities. But a sand-bound connecting waterway was a barrier to anything larger than shallow draft schooners and sloops operating in the coastal lumber trade.

It was not as if there had been no attempts through the years to remedy the situation of being quasi-landlocked. Ever since the schooner trade in lumber began in the early 1800's, townsmen had a businessman's eye on the Gulf of Mexico. But a method was needed to dredge a channel through the sandbars in the Calcasieu River which emptied into the Gulf, a mere 32 miles below the town limit.

In the mid-1870s, and again early in the 1880s, efforts were made to dredge such a channel. The federal government, in 1916, turned down a request to develop a port through Calcasieu Pass.

In 1924 the Louisiana legislature created the Lake Charles Harbor and Terminal District and the board called for a bond issue to finance construction of two transit sheds and two ship berths. The facilities were completed in time to accommodate the freighter Southland for the formal opening on Nov. 30, 1926.

The next chapter in the saga of Lake Charles' pursuit of a passage to the sea unfolded in 1934 with another request to the federal government for construction of a channel through Calcasieu Pass. Congress approved and the new channel was opened three years later.

There is little doubt that the Lake Charles short route to the sea is a major factor in its continuing growth. Incoming vessels now navigate through Calcasieu Pass and up the river of the same name.

The port facilities include about 60 public and private wharves on the main and two connecting channels. More than 20 of the wharves handle petroleum and petrochemical products.

The port has nearly 735,000 square feet of covered area in its 10 transit sheds on the waterfront and 6,000 feet of waterfront berthing can accommodate 13 vessels.

Serving these general cargo facilities are three linehaul railroads, nine interstate motor carriers and numerous barge lines.

The port also has special facilities, such as a bulk terminal, bulk liquid storage, a grain elevator and a woodchip storage area. Plans for a facility to accommodate liquified natural gas tankers are being completed.

Other additions and modifications are included in a five-year, $19.5 million capital investment program. One option calls for construction of a railroad trestle to open up an additional 500 acres for port use.

Port officials expect cargo movement to triple by the turn of the century, indicating that the port story is by no means complete. ⚓

It came floating in from the sea early this year like a prehistoric monster. Encrusted with barnacles and slime, it was round and 30 inches in diameter. The relic floated into the mouth of Guantanamo Bay, Cuba, and many thought it was buoy that had lost its mooring. But Navy detonation experts determined that it was an undetonated World War II mine, a type used by the Americans and British to deter enemy boats from entering a bay or harbor. The mine, an immediate hazard, was towed to sea where divers rigged a 20 pound charge of explosives to the mine and exploded it by remote control. Bomb experts guessed that the mine carried nearly 100 pounds of explosives, which made it a "monster" in anybody's book.

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